



Discover the Experience

Wideband Radio Channel Emulator EB Prosim C2



Test Solution for 3G, 3GPP LTE, WiMAX and Beyond

The development of wireless systems imposes heavy requirements on product development methods and testing. Understanding the radio channel behaviour is a key factor in developing wireless products successfully.

EB PropSim C2 is a technology-independent radio channel emulator enabling emulation of all standard and future channel models and signal types in a broad frequency range. It is an unrivalled solution for the integration and verification or comparison of 2×2 MIMO-capable wireless products and systems.



KEY INFORMATION

- ▶ Technology-independent radio channel emulator
- ▶ File-based real-time emulation
- ▶ Frequency range 350 MHz-6 GHz
- ▶ Bandwidth up to 70 MHz
- ▶ 2 physical inputs/ outputs
- ▶ Up to 4 fading channels
- ▶ Up to 24 fading paths per channel
- ▶ Propagation delay up to 1.6 ms
- ▶ Digital baseband, analog baseband and RF interfaces

- ▶ Interfering signal types AWGN, CW, GMSK, WCDMA, 8-PSK
- ▶ Support for 2×2 MIMO channel emulation
- ▶ Complex correlation
- ▶ Pre-store standard channel models (e.g. ITU, 3GPP, 3GPP LTE, WiMAX)
- ▶ User-defined channel models
- ▶ Real-time adjustable emulation parameters
- ▶ ATE control through GPIB and Ethernet

More detailed information available in EB PropSim C2 datasheet.

Improved Product Quality and Reduced Time-to-Market

Wideband Radio Channel Emulator

EB Propsim C2 is a radio channel emulator with two physical channels. The unit is equipped with two physical channels and up to four fading channels enabling e.g. 2x2 MIMO testing. It reproduces real world propagation phenomena such as multi-path and fast fading, sliding delays, path loss, Doppler shift, and shadowing in laboratory conditions. EB Propsim C2 helps to reduce the time-to-market of wireless products by speeding up all phases of the product development cycle. It enables detection of design errors at the earliest and least expensive stage of the development. EB Propsim C2 incorporates three connection interfaces - RF, analog baseband and digital baseband. This allows it to be used throughout the product development cycle from ASIC design verification and algorithm testing in digital baseband to conformance testing using the RF interface.

EB Propsim C2 seamlessly covers frequencies from 350MHz to 6GHz and it supports signals with bandwidth up to 70MHz. It provides an accurate test solution for example for 3G, Wi-Fi, WiMAX, 3GPP LTE, HSPA Tx/Rx diversity and 4G testing. The channel emulation quality meets even the most severe demands of established and future wireless technologies. Due to its real-time file-based emulation approach, EB Propsim C2 enables systematic, repeatable laboratory testing of wireless systems under realistic conditions with comparable results.

Today EB Propsim C2 is used by major chipset manufacturers, mobile terminal and infrastructure equipment manufacturers e.g. in product development, conformance testing and benchmarking of different mobile terminals.

Fully Integrated Test Solution

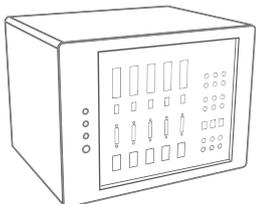
EB Propsim C2 design combines performance with exceptional ease of use by incor-

porating the graphical user interface with an integrated PC, touch screen and keyboard. Available internal interference generator and RF local oscillators greatly simplify the test setup and assure user-friendliness.

Channel modelling tools allow fast and straightforward generation and modification of test scenarios - be it the use of ready-to-run standard models or any user-defined model. With the EB Propsim C2 radio channel emulator defining fading profiles, selecting different shapes of Doppler spectrum and creating hopping or smoothly sliding delays for various paths is easy and convenient. EB Propsim C2 design allows you to import emulation files from other channel modelling tools and emulation parameters can be changed on the fly during emulation. The fully digital implementation enables that the real-time file-based emulation can be paused, continued and run step-by-step. This ensures that the design errors can be identified quickly and efficiently.

Test early on in the development process

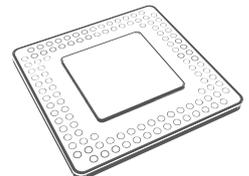
- digital baseband interface allows testing of chipset design and baseband algorithms already when they are being developed.



Signalling Tester



EB Propsim C2



Chipset Under Development



elektrobit.com

Automaatiotie 1, FI-90460 Oulunsalo, Finland Tel. +358 40 344 2000 Fax +358 8 570 1301

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